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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,714	07/20/2001	Takeshi Matsui	09792909-5091	1494

26263 7590 07/14/2004

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EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,714

Applicant(s)

MATSUI ET AL.

Examiner

Javid A Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 19, 2004 has been entered.

Double Patenting

Claim 11 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 10. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant does not explicitly specify the significant of dividing light amounts into "a first and a second light amounts". Applicant should clearly specify the positions of the two light amounts.

Questions: What does applicant mean by using "a lower order"? For example: consider the light amounts from 10-0, the step 10 considers a first light amount and the step 9 considers as a

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second light amount since is a lower order respect to step 10. Now what does applicant consider the step 9 in respect to steps 8 and 7?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 10-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. (hereinafter referred as a Doherty).

1. Claims 1 and 14.

Doherty in figs. 1 and 2 illustrates the step of "A display control apparatus for controlling a display apparatus which displays an image in digital gradation". Doherty in col. 2 48-67 discloses the step of "the image being from a frame of a plurality of frames, the display control apparatus comprising: inputting means for inputting digital values corresponding to pixel values which compose the image;" as the data is received as a series of frames of data. This data is formatted into bit-planes, each bit-plane having one bit of data for each pixel. Doherty in figs. 3A and 3B, also in col. 4 lines 38-56 teaches the step of "signal production means for producing a signal for driving display apparatus so that the display apparatus emits a light of divisional light amounts in such a manner as to be distributed within a time corresponding to display of the frame, the light amounts being obtained by dividing light amounts corresponding to bits which compose the digital values". Doherty in col. 6 lines 1-51 discloses the data format as bit-planes. Doherty in abstract teaches that each bit-plane having one bit of data for each

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pixel and representing a bit weight of the intensity value to be displayed by the pixels. Doherty does not explicitly specify the following step of the claim language, but it would have been obvious to a person skilled in the art to determine first part of the frame time in fig. 3A indicates with MSB as a first light amount and the second part (MSB-1) can be represented as a second light amount, and the division number can be selected from the first and the second light values to be represented as 0 or 1. Applicant should explicitly specify the significant of the divisions and the differences between the specified numbers (0 and 1) to the invention. "Wherein both of a first light amount corresponding to a predetermined bit of the bits that compose the digital values and a second light amount corresponding to a bit in a lower order by one bit to the predetermined bit are divided, the first and second light amounts being divided so that a difference between division numbers of the first and second light amounts of adjacent bits whose light amount are divided in one of 0 and 1, including a case wherein at least one of the division numbers is greater than 2, Doherty in col. 3, lines 52-62 teaches the step of "wherein the display apparatus includes light emission means for emitting light of variable intensity, the light emission means including at least one light source for emitting the light with variable intensity and a light value corresponding to each pixel that switches on or off to effect emission of the light from said light source, the light value being driven by the signal from the signal production means". It would have been obvious that light source for emitting the light with variable intensity and the light value corresponding to each pixel, to illustrate an image. The light value is a signal and driven by the clock signal. The motivation would be for various modifications of the disclosed embodiments, as well as alternative embodiments, will be

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apparent to persons skilled in the art. It is, therefore, contemplated that the Doherty's invention will cover all modifications that fall within the true scope of the Applicant's invention.

2. Claim 2.

The step is obvious because Doherty in Fig. 3a teach the limitation such as the direction of time.

3. Claim 3.

Doherty in col. 5, lines 12-25 teaches the step of the signal for driving display obtained by dividing the light amounts corresponding to the bits may be emitted at timings at which the light may be symmetrical within the time corresponding to one screen.

4. Claim 4.

Doherty in col. 4, lines 38-57 teaches the step of a signal for driving display apparatus so that the light of the divisional light amounts obtained by dividing the light amount corresponding to a predetermined bit and the light of the divisional light amounts obtained by dividing the light amount corresponding to a bit adjacent to the bit may be emitted at timings close to each other within the time corresponding to display of the frame.

5. Claim 5.

The step of claim 5 is obvious because Doherty in figs. 3A and 3B illustrates the limitations.

6. Claim 10.

The step is obvious because, Doherty in col. 3, lines 11-23 teaches the step of signal production produces the signal for causing said light emission to emit pulse width modulated light or intensity modulated light.

7. Claim 11.

It is duplicated of claim 10. See rejection of claim 10.

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8. Claim 12.

The step is obvious because, Doherty in col. 1 lines 20-39 teaches the step of light emission emits light of a plurality of color components.

9. Claim 13.

The step is obvious because, Doherty in fig. 4 item 34 teaches the step of signal production produces the signal for causing digital gradation display by a plane sequential rewriting method to be performed.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini


MATTHEW LUU
PRIMARY EXAMINER